



Patent
TS-7568 (US)
JDA

ADJ
D1-09-03

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on or before the date shown below.


Jennifer D. Adamson

Date: December 18, 2002

RECEIVED
DEC 30 2002
TC 1700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re application of)
DAVID R. KENDALL)
Serial No. 09/704,022) Group Art Unit 1714
Filed November 1, 2000) Examiner C. Toomer
ADDITIVE CONCENTRATION) December 18, 2002
)

ASSISTANT COMMISSIONER FOR PATENTS
Washington, DC 20231

Sir:

APPELLANT'S BRIEF

The following brief is on appeal of a final rejection of claims 1-22 of the above-identified U.S. patent application. The final rejection was contained in an Office Action mailed on July 16, 2002, and a Notice of Appeal was mailed by Applicant on September 24, 2002. This brief is filed in triplicate. Please charge the fee for filing of this brief to Shell Oil Company Deposit Account No. 19-1800. A one-month extension of time accompanies this brief. It is respectfully requested that the Board consider the following arguments and reverse

01/16/2003 ~~the final rejection of claims 1-22 in the above-identified application.~~

01 FC:1402 320.00 CH
R:\LEGAL\JDA\AMDS\TS7568 AB.doc

REAL PARTY IN INTEREST

The invention of the present application is assigned to Shell Oil Company, which is the real party of interest in the present appeal.

RELATED APPEALS AND INTERFERENCES

Appellant, and appellant's legal representative, are not aware of any appeals or interferences that directly affect or could directly be affected by or have a bearing on the Board's decision in the present appeal.

STATUS OF THE CLAIMS

Claims 1-22 stand finally rejected under 35 U.S.C. §103(a). Rejection of Claims 1-22 is presently appealed.

STATUS OF AMENDMENT

No amendments were requested after the Office Action of July 16, 2002.

SUMMARY OF THE INVENTION

The invention is an additive concentrate comprising an oil soluble hydrocarbyl poly(oxyalkylene) aminocarbamate having a number average molecular weight in the range of from 600 to 10,000 having at least one basic nitrogen atom wherein the hydrocarbyl group contains 1-30 carbon atoms, and an oil soluble hydrocarbyl amine of formula R-NH₂, wherein R represents a group R' or a group R'-CH₂-, wherein R' represents a hydrocarbyl group having a number average molecular weight in the range of from 750 to 6,000.

ISSUES

- 1) Does Fuentes-Afflick US 6,203,584 B1 ('584) provide a *prima facie* basis for rejection of claims 1-22 under 35 U.S.C. §103(a)?
- 2) Does Buckley WO 91/12303 ('303) provide a *prima facie* basis for rejection of claims 1-22 under 35 U.S.C. §103(a)?

GROUPING OF CLAIMS

The claims stand or fall together.

ARGUMENTS

1) Rejection of Claims 1-22 over the '584 Reference

To establish a *prima facie* basis for obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on applicant's disclosure [MPEP § 2142; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).]

The present invention teaches the combination of hydrocarbyl poly(oxyalkylene) aminocarbamate and a hydrocarbyl monoamine with certain molecular weights and in certain ratios as an additive, in particular, as a gasoline additive for improving storage stability characteristics. The '584 reference teaches the combination of an amine plus an ester for reducing friction and fuel consumption in an internal combustion engine. There is no suggestion or motivation in this reference to modify its teachings in order to obtain the presently claimed invention. Secondly, one skilled in the art looking for an additive to improve storage stability would not have a reasonable expectation of success from reading the '584 reference. Finally, this reference does not teach nor suggest all the claim limitations. In particular, there is no suggestion of using the particular combination of a hydrocarbyl poly(oxyalkylene) aminocarbamate having a molecular weight in the range 600 to 10,000 with a hydrocarbyl substituent containing 1-30 carbon atoms with a monoamine having a

number average molecular weight in the range of 750 to 6000. Thus, a *prima facie* case for obviousness has not been established.

2) Rejection of Claims 1-22 over the '303 Reference

The '303 reference teaches a fuel additive composition for minimizing deposits in a gasoline intake system comprising a hydrocarbyl poly(oxyalkylene) aminocarbamate and a hydrocarbyl amine. The hydrocarbyl amine has a molecular weight between about 300 and about 700. The '303 reference teaches on page 10, lines 33-34 and page 11, lines 1-9, that the low molecular weight of the hydrocarbyl amine is required to obtain the surprising results of the invention, as well as to avoid precipitation problems. In the present application, the stability of a fuel additive is disclosed and a hydrocarbyl amine with a molecular weight in the range of 750 to 3000 is used in combination with a hydrocarbyl poly(oxyalkylene) aminocarbamate. In the case cited by the Examiner, *Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985), the patentee claimed an invention having proportions. These proportions were not the same as the prior art, but were close enough to warrant the patentee's claims anticipated and obvious. The case states at page 783, that "the proportions are so close that *prima facie* one skilled in the art would have expected them to have the same properties." Here, the prior art teaches that the use of a low molecular weight hydrocarbyl amine avoids a precipitation problem and accomplishes the purpose of the invention. As the instant application is directed toward fuel additive stability, one skilled in the art would not want to add something that would create precipitation problems. In the instant application, the ranges of the prior art and the claimed invention could be considered to overlap at the lower end, however, the prior art clearly teaches away from extending the range to as high a molecular weight as 3000 or more. The '303 reference does not have any suggestion or motivation to modify the reference, there would certainly not be a reasonable expectation for

success by modifying the reference, and the reference does not teach or suggest all of the claim limitations. Therefore, a *prima facie* case for obviousness has not been established.

CONCLUSION

For the reasons set forth above, Applicant asserts that the rejections made by the Examiner are improper. Applicant therefore respectfully requests that the Board reverse the Examiner's rejections.

Respectfully submitted,

DAVID R. KENDALL



His Attorney, Jennifer D. Adamson
Registration No. 47,379
(713) 241-3901

P.O. Box 2463
Houston, TX 77252-2463

APPENDIX

CLAIMS ON APPEAL ARE 1-22:

1. An additive concentrate comprising:
an oil soluble hydrocarbyl poly(oxyalkylene) aminocarbamate having a number average molecular weight (M_n) in the range 600 to 10,000 with at least one basic nitrogen atom wherein the hydrocarbyl substituent contains 1-30 carbon atoms; and,
an oil soluble hydrocarbyl amine of formula $R-NH_2$ wherein R represents a group R' or a group $R'-CH_2-$, wherein R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 750 to 6,000
wherein the aminocarbamate and the amine have a weight ratio in the range of 6:1 to 1:6.
2. The concentrate of Claim 1, in which the weight ratio of the hydrocarbyl poly(oxyalkylene) aminocarbamate to the hydrocarbyl amine of formula $R-NH_2$ is in the range 1:1 to 1:2.
3. The concentrate of Claim 1, in which R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 900 to 3,000.
4. The concentrate of Claim 1, in which R' represents a polyalkenyl substituent.
5. The concentrate of Claim 1, in which R' represents a polyisobutenyl substituent.
6. The concentrate of Claim 1, further comprising an anti-corrosion additive.
7. A gasoline composition comprising:
a major amount of a gasoline suitable for use in a spark ignition engine; and,
a minor amount of additive concentrate comprising:
an oil soluble hydrocarbyl poly(oxyalkylene) aminocarbamate having a number average molecular weight (M_n) in the range 600 to 10,000 with at least one basic nitrogen atom wherein the hydrocarbyl substituent contains 1-30 carbon atoms; and,

an oil soluble hydrocarbyl amine of formula $R-NH_2$ wherein R represents a group R' or a group $R'-CH_2-$, wherein R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 750 to 6,000

wherein the aminocarbamate and the amine have a weight ratio in the range of 6:1 to 1:6.

8. The gasoline composition of claim 7 wherein the hydrocarbyl poly(oxyalkylene) aminocarbamate and the hydrocarbyl amine of formula $R-NH_2$ are present in a combined amount in the range 50 to 5,000 ppmw, based on total composition.
9. The gasoline composition of claim 8 in which the weight ratio of the hydrocarbyl poly(oxyalkylene) aminocarbamate to the hydrocarbyl amine of formula $R-NH_2$ is in the range 1:1 to 1:2.
10. The gasoline composition of claim 9 in which R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 900 to 3,000.
11. The gasoline composition of claim 10 in which R' represents a polyalkenyl substituent.
12. The gasoline composition of claim 10 in which R' represents a polyisobutenyl substituent.
13. A process for the preparation of a gasoline composition which comprises:
adding to gasoline an additive concentrate comprising:
an oil soluble hydrocarbyl poly(oxyalkylene) aminocarbamate having a number average molecular weight (M_n) in the range 600 to 10,000 with at least one basic nitrogen atom wherein the hydrocarbyl substituent contains 1-30 carbon atoms; and,
an oil soluble hydrocarbyl amine of formula $R-NH_2$ wherein R represents a group R' or a group $R'-CH_2-$, wherein R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 750 to 6,000

wherein the aminocarbamate and the amine have a weight ratio in the range of 6:1 to 1:6.

14. The process of Claim 13 in which the hydrocarbyl poly(oxyalkylene) aminocarbamate and the hydrocarbyl amine of formula R-NH₂ are present in a combined amount in the range 50 to 5,000 ppmw, based on total composition.
15. The process of Claim 13 in which the weight ratio of the hydrocarbyl poly(oxyalkylene) aminocarbamate to the hydrocarbyl amine of formula R-NH₂ is in the range 1:1 to 1:2.
16. The process of Claim 13 in which R' represents a polyalkenyl substituent.
17. The process of Claim 13 in which R' represents a polyisobutenyl substituent.
18. A method of operating a spark-ignition internal combustion engine which comprises introducing into the combustion chambers of said engine a gasoline composition comprising:
a major amount of a gasoline suitable for use in a spark ignition engine; and,
a minor amount of additive concentrate comprising:
an oil soluble hydrocarbyl poly(oxyalkylene) aminocarbamate having a number average molecular weight (M_n) in the range 600 to 10,000 with at least one basic nitrogen atom wherein the hydrocarbyl substituent contains 1-30 carbon atoms; and,
an oil soluble hydrocarbyl amine of formula R-NH₂ wherein R represents a group R'
or a group R'-CH₂-, wherein R' represents a hydrocarbyl group having a number average molecular weight (M_n) in the range 750 to 6,000
wherein the aminocarbamate and the amine have a weight ratio in the range of 6:1 to 1:6.
19. The method of Claim 18 in which the hydrocarbyl poly(oxyalkylene) aminocarbamate and the hydrocarbyl amine of formula R-NH₂ are present in a combined amount in the range 50 to 5,000 ppmw, based on total composition.

20. The method of Claim 18 in which the weight ratio of the hydrocarbyl poly(oxyalkylene) aminocarbamate to the hydrocarbyl amine of formula R-NH₂ is in the range 1:1 to 1:2.
21. The method of Claim 18 in which R' represents a polyalkenyl substituent.
22. The method of Claim 18 in which R' represents a polyisobutenyl substituent.